

REMARKS

This is in response to the Office Action mailed on January 20, 2004, and the references cited therewith. In response thereto, claims 52-59, 62-64, 66, 67, 70, 71, 73, and 74 are amended and claim 51 is canceled. Reconsideration of the claims and the rejections is respectfully solicited.

Information Disclosure Statement

Applicant submitted an Information Disclosure Statement and a 1449 Form on April 7, 2003. Applicant respectfully requests that an initialed copy of the 1449 Form be returned to Applicants' Representatives to indicate that the cited references have been considered by the Examiner.

Detailed Action Does Not Agree with the Office Action Summary

Applicant respectfully submits that it is unclear which claims stand rejected in the Office Action mailed January 20, 2004. On the Office Action Summary page, claims 1 and 4-75 are pending in the application. Of these claims, 10, 13, 24, 29-32, 38 and 44 are withdrawn. The remaining claims 1, 4-9, 11, 12, 14-23, 25-28, 33-37, 39-43 and 45-75 are listed as rejected. However, the Detailed Action in the body of the Office Action lists claims 52-59, 62-64, 66, 67, 70, 71, 73, and 74 as rejected under 35 USC § 112, second paragraph (see section no. 2 on page 2 of the Office Action), and claims 51 and 52 as rejected under 35 USC § 102(e) (see section no. 3 on page 3 of the Office Action). Thus, the Office Action does not state any disposition for claims 1, 4-9, 11, 12, 14-23, 25-28, 33-37, 39-43, 45-50, 60, 61, 65, 68, 69, 72 and 75. Since there are no grounds for rejection of claims 1, 4-9, 11, 12, 14-23, 25-28, 33-37, 39-43, 45-50, 60, 61, 65, 68, 69, 72 and 75 listed anywhere in the Office Action, Applicant must assume that there are no rejections of these claims. Also, since only claims 51 and 52 were rejected on art, Applicant must assume that claims 1, 4-50 and 53-75 suffer no art rejections.

§112 Rejection of the Claims

Claims 52-59, 62-64, 66, 67, 70, 71, 73, and 74 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which Applicant regards as the invention. Claim 53 suffered from a lack of antecedent basis, and claims 52-59, 62-64, 66, 67, 70, 71, 73, and 74 were rejected for reciting an allegedly ill-defined phrase “predetermined shape.” Applicant has amended these claims to correct the antecedent basis problem, and to more clearly define the shape using a phrase defined in the specification as “substantially cone-shaped.” In light of these amendments made in response to this non-art rejection, reconsideration of the claims and the rejections is respectfully solicited.

Substantially Cone-Shaped

The Office Action states further in section no. 2, page 2, that claims 1, 4-9, 11, 12, 14-23, 25-28, 33-37, 39-43, 45-51, 60, 61, 65, 68, 69, 72 and 75 recite “substantially cone-shaped” which Applicant “insists clearly describes a range of shapes supported by the specification that are not actually ‘cone-shaped’ by the mathematical or dictionary definition.” This does not state that these claims are in any way rejected under the patent laws or agency rules governing patent examination. However, Applicant would like to respectfully explain for the record that this statement is immaterial.

A patent Applicant is allowed to define his or her own terms in a patent application. By the very nature of patent application describing heretofore unknown inventions and discovery, the courts have recognized the need for patent Applicants to define new terms or define new definitions for existing terms with which to describe their inventions. Thus, a patent Applicant is allowed to be his or her own lexicographer. This is such a case. Applicant respectfully submits that Applicant’s own definition of “substantially cone-shaped” must take the description ascribed to it in Applicant’s own specification.

The fact that the Examiner finds a narrow definition of the phrase “cone” or a mathematical definition of the word “cone” is not dispositive. In fact, the modifiers “substantially” and *cone-shaped*” evoke definitions which are the opposite of mathematical precision. In fact the origin of the word “cone” is anything but mathematical. For example, the Merriam Webster definition quoted by the Examiner is incomplete. The complete definition of the word “cone” is much broader:

¹**cone** \ˈkōn\ *n* (MF or L; MF, fr. L *conus*, fr. Gk *kōnos* — more at HONE] (1562) **1 a**: a mass of ovule-bearing or pollen-bearing scales or bracts in trees of the pine family or in cycads that are arranged usu. on a somewhat elongated axis **b**: any of several flower or fruit clusters suggesting a cone **2 a**: a solid generated by rotating a right triangle about one of its legs called also right circular cone **b**: a solid bounded by a circular or other closed plane base and the surface formed by line segments joining every point of the boundary of the base to a common vertex — see VOLUME table **c**: a surface traced by a moving straight line passing through a fixed vertex **3**: something that resembles a cone in shape: as **a**: one of the short sensory end organs of the vertebrate retina that function in color vision **b**: any of numerous somewhat conical tropical gastropod mollusks (family Conidae) **c**: the apex of a volcano **d**: a crisp cone-shaped wafer for holding ice cream

²**cone** *vt* coned; con-ing (ca. 1859) **1** : to make cone shaped **2**: to bevel like the slanting surface of a cone (~ a tire)

Webster's Ninth New Collegiate Dictionary, copyright 1989 Merriam-Webster Inc.

Further, the accepted scientific usage of the term “cone” is very broad and encompasses a wide range of “cone-like” shapes:

cone [BOT] The ovulate or staminate strobilus of a gymnosperm. [ENG ACOUS] The cone-shaped paper or fiber diaphragm of a loudspeaker. [GEOL] A mountain, hill, or other landform having relatively steep slopes and a pointed top. [HISTOL] A photoceptor of the vertebrate retina that responds differentially to light across the visible spectrum, providing both color vision and visual acuity in bright light. [MATH] A solid bounded by a region enclosed in a closed curve on a plane and a surface formed by the segments joining each point of the closed curve to a point which is not in the plane. [MET] The part of an oxygen gas flame adjacent to the orifice of the tip. [TEXT] A bobbin on which yarn is wound for weaving. McGraw-Hill Dictionary of Scientific and Technical Terms, Third Edition, copyright 1984, McGraw-Hill, Inc.

Finally, the present patent application is not in the field of mathematics. It is in the imprecise field of semiconductor processing in which the products are not perfectly shaped. In the real-world, semiconductor products are rounded, imperfectly shaped and often irregular.

Applicant has merely attempted to describe a shape with a word used with modifiers to describe an approximation.

§102 Rejection of the Claims

Claim 51 was rejected under 35 USC § 102(e) as being anticipated by Ooto et al. (U.S. Patent No. 6,215,187). Applicant does not admit that the Ooto et al. patent is prior art to the present patent application and reserves the right to swear behind the Ooto et al. patent at a later date. However, since claim 51 is canceled, this rejection has become moot.

Claim 52 was rejected under 35 U.S.C. § 102(a) as being anticipated by Yamamoto et al. ("Low Temperature Metal/ON/HSG-Cylinder..."). Applicant respectfully traverses this rejection since all of the elements of claim 52 are not shown or described in the Yamamoto et al. paper. For example, and not by way of limitation, the Yamamoto et al. paper does not describe forming a layer of *forming material* and forming at least one cavity with a *substantially cone-shape* in a surface of the layer of forming material. These limitations are found in rejected claim 52. Since all of the limitations of claim 52 are not found in the single reference to Yamamoto et al., the rejection under 35 U.S.C. § 102(a) fails. Reconsideration of claim 52 is respectfully solicited.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6904 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.


Respectfully submitted,

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By their Representatives,

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Date May 18, 2004

By 
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 18 day of May, 2004.



Name



Signature